

IN THE CLAIMS

Please cancel Claims 1-4, 13, 28, and 29, without prejudice.

Claims 1-4 (canceled)

Claim 5 (currently amended) The method of claim 1 ~~34~~, wherein said administering comprises delivery via a route selected from the group consisting of aerosol inhalation, dry powder inhalation, liquid inhalation and liquid instillation.

Claim 6 (currently amended) The method of claim 1 ~~36~~, wherein the polysaccharide is administered via aerosol inhalation, and the method further comprises:

preparing a liquid formulation comprising the polysaccharide, wherein the concentration of the polysaccharide is less than about 5 mg/ml and the molecular weight of the polysaccharide is less than about 1.5×10^6 Daltons;

aerosolizing said liquid formulation to form a breathable mist such that the particle size of the polysaccharide is less than about 10 microns; and

delivering said therapeutically effective amount of the polysaccharide by inhalation of said breathable mist by said mammal.

Claim 7 (original) The method of claim 6, wherein the molecular weight of the polysaccharide is less than about 587,000 Daltons.

Claim 8 (original) The method of claim 6, wherein the molecular weight of the polysaccharide is less than about 220,000 Daltons.

Claim 9 (original) The method of claim 6, wherein the molecular weight of the polysaccharide is less than about 150,000 Daltons.

Claim 10 (original) The method of claim 6, wherein said breathable mist is formed by a nebulizer.

Claim 11 (original) The method of claim 10, wherein said nebulizer operates at a pressure of at least about 15 psi.

Claim 12 (original). The method of claim 10, wherein said nebulizer operates at a pressure of at least about 30 psi.

Claim 13 (Canceled)

Claim 14 (currently amended) The method of claim ~~13~~ 36, wherein the modification comprises cross-linking.

Claim 15 (currently amended) The method of claim ~~13~~ 36, wherein the modification comprises addition of sulfate groups.

Claim 16 (currently amended) The method of claim ~~13~~ 36, wherein the modification comprises addition of carboxyl groups.

Claim 17 (currently amended) The method of claim ~~13~~ 36, wherein the modification comprises attachment of lipophilic side chains.

Claim 18 (currently amended) The method of claim ~~13~~ 36, wherein the modification comprises introduction of acetyl groups.

Claim 19 (currently amended) The method of claim ~~13~~ 36, wherein the modification comprises formation of an ester.

Claim 20 (currently amended) The method of claim ~~13~~ 36, wherein the modification comprises reaction with a carbodiimide.

Claim 21 (currently amended) A method of administering to a mammal a therapeutic formulation, the formulation comprising a polysaccharide and a drug, at a selected dose via a respiratory tract, the method comprising:

formulating a solution comprising the polysaccharide to achieve a controlled polysaccharide size of between about 50,000 and 1.5×10^6 Daltons at a concentration of less than about 5 mg/ml (w/v) of the polysaccharide;

producing an aerosol of the solution such that a droplet of the aerosol has a median mass distribution size of between about 0.5 to about 10 microns; and

delivering said aerosol into said respiratory tract by inhalation.

Claim 22 (original) The method of claim 21, wherein the selected dose of polysaccharide is in a range of about 10 µg/kg body weight/day to about 1 mg/kg body weight/day.

Claim 23 (original) The method of claim 21, wherein the selected dose of polysaccharide is in a range of about 50 µg/kg body weight/day to about 500 µg/kg body weight/day.

Claim 24 (original) The method of claim 21, wherein the selected dose of polysaccharide is in a range of about 100 µg/kg body weight/day to about 300 µg/kg body weight/day.

Claim 25 (canceled)

Claim 26 (currently amended). The method of claim ~~25~~ 21, wherein the drug is selected from the group consisting of terbutaline, albuterol (salbutamol) sulfate, ephedrine sulfate, ephedrine bitartrate, isoetharine hydrochloride, isoetharine mesylate, isoproteranol hydrochloride, isoproteranol sulfate, metaproteranol sulfate, terbutaline sulfate, procaterol, bitolterol mesylate, atropine methyl nitrate, cromolyn sodium, propranolol, fluroisolid, ~~ibuprofen~~ ibuprofen, gentamycin, tobermycin, pentamidine, penicillin, theophylline, bleomycin, etoposide, captopril, n-acetyl cysteine, verapamil, calcitonin, atriopeptin, .alpha.-1 antitrypsin (protease inhibitor), interferon, vasopressin, insulin, interleukin-2, superoxide dismutase, tissue plasminogen activator (TPA), plasma factor 8, epidermal growth factor, tumor necrosis factor, heparin, lung surfactant protein, and lipocortin, prostaglandins, amphotericin B, progesterone, isosorbide dinitrate, testosterone, nitroglycerin, estradiol, doxorubicin, beclomethasone and esters thereof, vitamin E, cortisone, dexamethasone and esters thereof, DPPC/DPPG phospholipids, and betamethasone valerate.

Claim 27 (original) The method of claim 21 wherein the polysaccharide is chemically modified.

Claims 28-29 (canceled).

Claim 30 (currently amended) The method of claim ~~29~~ 21, wherein the drug is conjugated to the polysaccharide.

Claim 31 (original) A system for delivering a polysaccharide formulation to a respiratory tract of a mammal, comprising:

a mixture comprising a polysaccharide having a molecular weight of between about 50,000 and 1.5×10^6 Daltons at a concentration of less than about 5.0 mg/ml (w/v) of polysaccharide, and a breathable fluorocarbon propellant;

a canister adapted to contain said mixture under pressure;

a valve connected to said canister for regulating delivery of said mixture; and

a nozzle interconnected with said valve for transforming said mixture under pressure into an inhalable aerosol mist when said valve is actuated.

Claim 32 (original) The system of claim 31, wherein the polysaccharide in said aerosol mist has a median mass distribution size of between about 0.5 to about 10 microns.

Claim 33 (original) The system of claim 31, wherein said mixture further comprises a drug.

Claim 34 (new) A method of lung treatment comprising administering to a mammal a therapeutically effective amount of a polysaccharide that binds to elastic fibers, thereby preventing enzymes, oxidants, or other injurious agent from contacting and damaging said elastic fibers, wherein the polysaccharide is selected from the group consisting of chondroitin sulfate A, chondroitin sulfate B, chondroitin sulfate C, and heparan sulfate.

Claim 35 (new) A method of lung treatment comprising administering to a mammal a therapeutically effective amount of dextran at a therapeutically effective molecular weight, wherein the dextran binds to elastic fibers, thereby preventing enzymes, oxidants, or other injurious agent from contacting and damaging said elastic fibers.

Claim 36 (new) A method of lung treatment comprising administering to a mammal a therapeutically effective amount of a chemically modified polysaccharide that binds to elastic fibers, thereby preventing enzymes, oxidants, or other injurious agent from contacting and damaging said elastic fibers.